

AD-A070 489 ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 4/2  
14818C LANCE, MISSILE NUMBER 3398, ROUND NUMBER 328 APT.(U)  
APR 79

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METEOROLOGICAL DATA REPORT

14818C Lance  
Missile No. 3398  
Round No. 328 APT

by

WSMR Meteorological Team

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ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

**ECOM**

UNITED STATES ARMY ELECTRONICS COMMAND

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<p>14 <b>ECOM-REPORT DOCUMENTATION PAGE</b></p>		<p>READ INSTRUCTIONS BEFORE COMPLETING FORM</p>	
<p>1. REPORT NUMBER DR-997</p>		<p>2. GOVT ACCESSION NO.</p>	
<p>3. TITLE (and Subtitle) 14818C Lance Missile Number 3398 Round Number 328 APT.</p>		<p>3. RECIPIENT'S CATALOG NUMBER</p>	
<p>4. AUTHOR(s) WSMR Meteorological <i>data rept.</i></p>		<p>5. TYPE OF REPORT &amp; PERIOD COVERED</p>	
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<p>15. KEY WORDS (Continue on reverse side if necessary and identify by block number) 1. Ballistics 2. Meteorology 3. Wind</p>		<p>15a. DECLASSIFICATION/DOWNGRADING SCHEDULE</p>	
<p>16. ABSTRACT (Continue on reverse side if necessary and identify by block number) <i>This report contains</i> Meteorological data gathered for the launching of 14818C Lance, Missile Number 3398, Round Number 328 APT, are presented in tabular form.</p>			

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## INTRODUCTION

14814C Lance, Missile Number 3398, Round Number 328 APT was launched from LC-39, White Sands Missile Range (WSMR), New Mexico, at 1043 MST, 10 April 1979. The scheduled launch time was 1015 MST.

## DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

### 1. Observations

#### a. Surface

(1) Standard surface observations to include pressure, temperature ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{cm}/\text{m}^3$ ), wind direction, wind velocity and cloud cover were made at the LC-39 Wet Site at T-0 minutes.

#### b. Upper Air

(1) Low level wind data were obtained from RAPTS T-2 pibal observation as follows:

## SITE AND ALTITUDE

LC-33 T-10 mins 6100 feet

LC-33 T-0 mins 6000 feet

(2) Air structure data (rawinsonde) were collected at the following Wet Sites. Data were collected from surface to 125% of anodee in 500-foot increments.

USD 1005 MST

HMM 1005 MST

The data are presented in the following tabulations:

ELEVATION	4064	FEET/MSL
PRESSURE	863.5	MBS
TEMPERATURE	17.2	°C
RELATIVE HUMIDITY	22	%
DEW POINT	-4.8	°C
DENSITY	1032	GM/CM <sup>3</sup>
WIND SPEED	15 Gust 35	MPH
WIND DIRECTION	210	DEGREES
CLOUD COVER	7	Cu

TABLE I. SURFACE OBSERVATIONS TAKEN AT LC-39  
 AT 1042 MST, 10 APRIL 1979  
 140130 Lance (AD). MISSILE NUMBER 3398  
 ROUND NUMBER 320 APT

PIBAL DATA FORM

DD Number and Name (AD) 14818C Lance Missile Number 3398 Round 328APT

HEIGHT (Feet)	DIRECTION (Degrees)	SPEED (MPH)	HEIGHT (Feet)	DIRECTION (Degrees)	SPEED (MPH)
SUP	165	20.0	2100	250	50.5
100	135	15.0	2200	250	49.5
200	105	10.0	2300	250	48.5
300	075	05.0	2400	249	47.0
400	045	06.0	2500	249	46.5
500	007	07.5	2600	248	46.0
600	329	14.5	2700	248	45.5
700	291	21.5	2800	247	45.0
800	253	28.5	2900	245	45.0
900	254	33.5	3000	243	44.5
1000	255	38.5	3100	241	44.5
1100	256	43.5	3200	239	44.0
1200	257	48.5	3300	239	43.5
1300	256	50.0	3400	239	43.0
1400	255	51.0	3500	239	42.5
1500	254	52.0	3600	239	41.5
1600	252	53.0	3700	238	42.0
1700	252	53.0	3800	237	42.0
1800	251	52.5	3900	236	42.5
1900	251	52.0	4000	235	42.5
2000	250	51.5	4100	234	44.0

TABLE II. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1  
RELEASED FROM LC-33, AT 1005 LOCAL TIME, 10 April 1979.

PIBAL RELEASE POINT WSM COORDINATES  
X = 406,037.24 Y = 182,350.16 Z = 3977.30

APPROXIMATELY: one-half MILES South OF LAUNCHER



OD Number and Name (AD) 14818C Lance

Missile Number 3398

Round 328APT

HEIGHT (Feet)	DIRECTION (Degrees)	SPEED (MPH)
4200	232	45.0
4300	231	46.5
4400	229	47.5
4500	229	48.0
4600	229	48.0
4700	229	48.0
4800	229	48.0
4900	232	45.5
5000	235	42.5
5100	238	40.0
5200	240	37.0
5300	239	39.5
5400	238	42.0
5500	237	44.5
5600	236	47.0
5700	235	48.5
5800	233	50.0
5900	231	51.5
6000	229	52.5
6100	230	83.0
6200	7K unattainable due to high winds	
6300		
6400		
6500		

HEIGHT (Feet)	DIRECTION (Degrees)	SPEED (MPH)
6600		
6700		
6800		
6900		
7000		
7100		
7200		
7300		
7400		
7500		
7600		
7700		
7800		
7900		
8000		
8100		
8200		
8300		
8400		
8500		
8600		
8700		
8800		
8900		

TABLE II. (Cont)

NOTE: WIND DIRECTION DATA ARE REFERENCED

TRUE NORTH

(FIRING AZIMUTH OF TRUE NORTH)

# PIDAL DATA FORM

OD Number and Name (AQ) 14818C Lance Missile Number 3398 Pound 328 APT

HEIGHT (Feet)	DIRECTION (Degrees)	SPEED (MPH)	HEIGHT (Feet)	DIRECTION (Degrees)	SPEED (MPH)
SUR	165	20.0	2100	246	34.0
100	199	16.0	2200	245	33.5
200	233	11.5	2300	244	33.0
300	267	07.0	2400	243	32.5
400	301	02.5	2500	242	35.0
500	289	12.0	2600	241	37.5
600	276	21.0	2700	240	40.0
700	263	30.5	2800	239	42.0
800	250	39.5	2900	240	42.5
900	254	39.0	3000	240	42.5
1000	257	38.5	3100	240	43.0
1100	261	38.0	3200	240	43.0
1200	264	37.0	3300	238	43.0
1300	260	37.5	3400	236	43.0
1400	256	38.0	3500	234	43.0
1500	252	38.5	3600	231	42.5
1600	248	38.5	3700	232	44.5
1700	248	37.5	3800	232	46.0
1800	247	36.5	3900	232	47.5
1900	247	35.5	4000	232	49.0
2000	246	34.5	4100	234	51.0

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 2  
RELEASED FROM LC-33, AT 1043 LOCAL TIME, 10 April 1979

PIDAL RELEASE POINT WSTM COORDINATES  
X = 406,037.24 Y = 182,350.16 Z = 3977.30

APPROXIMATELY: one-half MILES South OF LAUNCHER

OB Number and Name (AD) 14818C Lance Missile Number 3398

Sound 328 APT

HEIGHT (Feet)	DIRECTION (Degrees)	SPEED (MPH)	HEIGHT (Feet)	DIRECTION (Degrees)	SPEED (MPH)
4200	236	52.5	6600		
4300	238	54.5	6700		
4400	239	56.0	6800		
4500	241	54.0	6900		
4600	243	52.0	7000		
4700	245	50.0	7100		
4800	247	48.0	7200		
4900	247	47.5	7300		
5000	247	47.0	7400		
5100	247	46.5	7500		
5200	247	46.0	7600		
5300	247	46.0	7700		
5400	246	45.5	7800		
5500	246	45.0	7900		
5600	245	44.5	8000		
5700	247	45.0	8100		
5800	248	45.5	8200		
5900	249	46.0	8300		
6000	250	46.5	8400		
6100	12K unattainable due to high winds		8500		
6200			8600		
6300			8700		
6400			8800		
6500			8900		

TABLE III . (Con\*)

NOTE: WIND DIRECTION DATA ARE REFERENCED

6

TRUE NORTH  
(FIRING AZIMUTH OF TRUE NORTH)



STATION ALTITUDE 3989.00 FEET MSL  
 10 APR. 79  
 ASCENSION NO. 104

SIGNIFICANT LEVEL DATA  
 100002016  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LOIN DEG

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
664.4	16.0	31.0
650.0	17.0	34.0
609.8	9.3	37.0
739.8	5.5	40.0
757.8	3.2	41.0
713.3	-2.0	45.0
700.0	-7.7	47.0
660.8	-2.6	51.0
595.8	-6.2	59.0
553.3	-13.5	38.0
532.5	-17.4	36.0
500.0	-18.8	39.0
470.3	-22.8	38.0
432.0	-25.5	45.0
425.8	-30.0	41.0
417.3	-30.5	34.0
410.3	-30.9	28.0
400.0	-31.6	24.0
389.3	-32.7	21.0
361.3	-36.9	24.0
342.3	-39.5	
300.0	-42.8	
253.8	-49.5	
250.0	-50.2	
237.6	-51.3	
232.3	-50.0	
229.6	-47.6	
212.3	-48.4	
210.0	-47.2	
209.0	-48.3	
192.8	-40.3	
184.3	-48.5	
180.3	-45.8	
171.8	-47.2	
153.6	-51.6	
150.0	-52.2	
123.6	-58.0	
100.0	-56.3	
75.3	-61.1	
70.0	-56.0	

STATION ALTITUDE 3939.00 FEET MSL  
 10 APR. 79  
 ASCENSION, I.O. 104

SIGNIFICANT LEVEL DATA  
 1000020104  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

PRESSURE	GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
55.2	65701.4	-62.0	
50.0	67744.4	-67.5	
37.3	73879.9	-56.2	
33.1	76425.6	-50.0	
30.0	78543.0	-51.7	
26.3	81376.1	-50.3	
23.3	84018.8	-45.7	
20.0	87395.8	-44.4	
14.8	94100.4	-30.2	
10.0	103033.7	-37.2	

STATION ALTITUDE 3589.00 FEET MSL  
10 APR 79 1005 HRS MSL  
ASCENSION NO. 104

UPPER AIR DATA  
1000020184  
WHITE SPRING

GEODETTIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GW/GM CM <sup>3</sup> WATER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TH)	WIND SPEED KNOTS	INDEX OF REFRACTION
3579.0	804.4	16.5	-9	31.0	1030.6	664.0	250.0	25.1	1.000257
4000.0	804.1	16.5	-6	31.1	1030.4	663.9	249.9	25.0	1.000257
4500.0	800.0	13.7	-1.5	34.1	1020.1	660.0	244.4	24.3	1.000254
5000.0	833.3	11.6	-3.2	35.2	1017.2	650.1	236.6	23.0	1.000249
5500.0	815.2	9.5	-4.7	36.4	1006.3	650.0	236.7	23.5	1.000245
6000.0	803.5	7.7	-5.7	38.0	994.0	650.5	232.7	35.2	1.000241
6500.0	780.6	0.4	-9.2	40.0	981.0	651.4	234.3	37.5	1.000237
7000.0	774.0	4.9	-7.4	40.5	966.2	650.2	235.3	34.9	1.000233
7500.0	759.7	3.4	-3.0	40.9	955.3	643.4	231.1	31.0	1.000229
8000.0	745.5	2.0	-0.5	42.3	942.6	640.7	235.5	25.1	1.000225
8500.0	731.6	.6	-10.3	43.7	929.7	643.0	243.2	33.7	1.000221
9000.0	717.6	-8	-11.2	45.1	917.1	643.3	243.9	44.3	1.000218
9500.0	704.3	-2.2	-12.1	46.6	904.2	641.7	244.2	41.0	1.000214
10000.0	690.8	-3.4	-13.0	47.9	891.1	640.2	244.6	37.4	1.000210
10500.0	677.6	-4.6	-13.6	49.3	876.1	630.8	243.4	34.7	1.000207
11000.0	664.7	-5.3	-14.4	50.9	855.2	637.3	243.0	32.1	1.000203
11500.0	651.8	-7.2	-15.3	52.1	832.7	635.7	240.6	32.4	1.000200
12000.0	639.0	-8.6	-16.3	53.6	810.5	634.0	230.0	33.5	1.000197
12500.0	626.5	-9.9	-17.2	55.1	788.5	632.3	230.2	35.0	1.000193
13000.0	614.2	-11.3	-18.2	56.0	766.7	630.0	235.6	37.0	1.000190
13500.0	602.4	-12.7	-19.2	58.2	745.1	628.9	235.4	38.0	1.000187
14000.0	590.5	-14.0	-20.7	59.5	723.1	627.4	235.8	40.2	1.000183
14500.0	578.7	-15.0	-22.9	59.7	701.5	626.1	237.5	41.1	1.000179
15000.0	567.2	-16.1	-25.2	58.0	680.2	624.0	239.0	42.1	1.000176
15500.0	555.0	-17.2	-27.7	58.3	659.1	623.5	240.9	42.0	1.000172
16000.0	544.7	-18.1	-29.1	57.1	638.0	622.3	240.6	42.0	1.000169
16500.0	533.7	-19.0	-30.2	56.1	617.2	621.2	242.0	42.0	1.000166
17000.0	522.3	-20.2	-31.0	57.0	596.5	619.2	243.0	43.2	1.000163
17500.0	512.2	-21.4	-31.9	37.9	575.4	618.5	240.2	44.6	1.000160
18000.0	501.6	-22.6	-33.7	38.4	554.4	616.3	243.0	47.9	1.000158
18500.0	491.4	-23.0	-35.0	38.7	533.0	613.0	250.9	51.9	1.000155
19000.0	481.3	-24.5	-34.6	38.4	512.1	614.4	250.9	54.9	1.000152
19500.0	471.4	-25.4	-35.5	38.0	491.7	613.3	250.4	57.0	1.000149
20000.0	461.5	-26.5	-36.1	38.2	471.0	611.9	249.2	59.5	1.000147
20500.0	451.9	-27.7	-36.7	41.4	450.1	610.5	247.2	62.5	1.000144
21000.0	442.4	-28.8	-37.4	42.1	430.0	609.0	245.7	65.0	1.000142
21500.0	433.2	-30.0	-39.0	44.9	410.4	607.0	244.4	70.0	1.000140
22000.0	424.0	-30.3	-39.3	49.5	390.0	605.3	244.4	72.5	1.000137
22500.0	415.0	-30.9	-42.1	42.1	370.0	603.4	243.1	75.0	1.000134
23000.0	406.2	-31.3	-44.2	26.4	350.0	601.9	247.0	75.3	1.000131



GEODOLIC COORDINATES  
32.40043 LAT DEG  
106.37033 LONG DEG

UPPER AIR DATA  
100002104  
WHITE SANDS

STATION ALTITUDE 3939.00 FEET MSL  
10 APR 79  
1005 HRS MJT  
ASCENSION NO. 104

GEOMETRIC ALTITUDE ASL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> WATER	SPEED OF SOUND M/SEC	WIND DATA DIRECTION DEGREE (TRUE)	WIND SPEED KNOTS	INDEX OF REFRACTION
43500.0	397.0	-32.0	23.5	574.5	603.0	243.8	76.7	1.000129
44000.0	399.1	-32.7	21.0	565.0	604.1	250.1	80.6	1.000126
44500.0	400.7	-34.0	21.9	554.5	604.5	250.8	84.0	1.000124
45000.0	372.5	-35.2	22.8	545.5	601.0	251.2	88.6	1.000122
45500.0	354.5	-39.4	23.6	536.5	599.5	251.5	90.3	1.000120
46000.0	350.6	-37.5	18.2**	527.2	599.0	251.9	89.2	1.000118
46500.0	343.8	-38.6	8.4**	518.1	590.7	251.0	86.7	1.000116
47000.0	341.2	-39.6		508.9	593.4	251.8	82.2	1.000113
47500.0	333.7	-40.1		499.3	594.7	251.7	75.8	1.000111
48000.0	329.3	-40.7		489.0	594.0	251.5	75.9	1.000109
48500.0	329.1	-41.3		479.3	593.2	252.0	75.9	1.000107
49000.0	312.0	-41.6		469.9	592.5	252.5	77.1	1.000105
49500.0	305.1	-42.4		460.6	591.8	252.7	81.4	1.000103
50000.0	298.3	-43.1		451.7	591.0	252.8	86.6	1.000101
50500.0	291.6	-44.1		443.5	589.0	252.8	92.8	1.000099
51000.0	289.0	-45.1		435.4	585.5	253.5	90.5	1.000097
51500.0	278.5	-46.2		427.5	580.9	254.2	94.4	1.000095
52000.0	272.3	-47.2		419.8	580.0	255.0	74.8	1.000094
52500.0	265.1	-48.2		412.2	584.5	255.7	62.2	1.000092
53000.0	260.1	-49.3		404.5	582.9	254.2	56.6	1.000090
53500.0	254.2	-49.9		398.8	582.1	249.9	60.4	1.000088
54000.0	245.3	-50.3		390.5	581.5	249.0	70.4	1.000086
54500.0	242.5	-50.9		380.2	580.5	243.2	84.0	1.000085
55000.0	237.0	-51.1		371.9	580.5	241.6	88.5	1.000083
55500.0	231.8	-49.3		360.4	582.9	240.2	89.9	1.000080
56000.0	225.5	-47.8		349.9	584.9	239.8	79.0	1.000078
56500.0	219.1	-48.0		342.2	584.0	240.7	70.4	1.000076
57000.0	215.1	-48.2		334.7	584.5	243.4	63.1	1.000075
57500.0	211.2	-47.3		320.5	584.5	240.4	65.2	1.000073
58000.0	208.4	-47.6		312.5	583.1	244.1	67.5	1.000071
58500.0	201.7	-48.1		312.5	584.4	249.2	70.1	1.000070
59000.0	197.1	-48.7		305.9	585.7	243.2	72.8	1.000068
59500.0	192.5	-49.3		299.7	585.9	243.5	75.1	1.000067
60000.0	185.2	-48.9		292.4	585.4	247.3	77.2	1.000065
60500.0	183.3	-48.3		285.0	584.1	243.0	78.9	1.000063
61000.0	179.7	-48.5		278.7	583.1	244.1	79.1	1.000062
61500.0	173.7	-47.0		270.5	583.5	242.2	79.2	1.000060
62000.0	171.7	-47.2		264.5	583.0	243.0	79.2	1.000059
62500.0	167.6	-48.5		258.2	583.9	239.0	79.0	1.000058
63000.0	163.9	-49.5		253.7	582.2	237.7	78.6	1.000057

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

UPPER AIR DATA  
1000020104  
WHITE SANDS

STATION ALTITUDE 3983.00 FEET MSL  
10 APR. 79  
1005 HRS MST  
ASCENSION NO. 104

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND M/SEC	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	160.2	-51.1		251.0	580.5	237.9	77.0	1.000056
44000.0	159.5	-52.0		240.5	579.5	233.1	75.4	1.000055
44500.0	158.9	-52.7		241.5	578.5	230.5	72.7	1.000054
45000.0	149.3	-53.3		236.0	577.6	233.2	68.8	1.000053
45500.0	145.2	-54.1		231.3	575.0	240.1	61.2	1.000052
46000.0	142.4	-54.8		227.2	573.0	241.4	56.7	1.000051
46500.0	139.0	-55.6		222.6	574.0	243.0	52.4	1.000050
47000.0	135.7	-56.3		218.1	573.0	244.0	51.3	1.000049
47500.0	132.6	-57.1		213.7	571.0	243.1	51.3	1.000048
48000.0	129.4	-57.8		209.4	571.0	248.2	51.7	1.000047
48500.0	126.4	-57.9		204.0	571.0	243.4	52.3	1.000046
49000.0	123.4	-57.7		199.5	571.0	244.1	53.4	1.000044
49500.0	120.5	-57.6		194.0	572.0	242.5	55.1	1.000043
50000.0	117.6	-57.4		189.9	572.2	241.7	57.7	1.000042
50500.0	114.8	-57.2		185.3	572.5	242.7	61.7	1.000041
51000.0	112.1	-57.1		180.7	572.7	243.7	62.3	1.000040
51500.0	109.5	-56.9		176.3	572.9	244.7	53.2	1.000039
52000.0	106.3	-56.7		172.0	573.1	243.1	44.0	1.000038
52500.0	104.3	-56.6		167.6	573.3	247.8	29.6	1.000037
53000.0	101.3	-56.4		163.7	573.5	252.8	12.9	1.000036
53500.0	99.4	-56.4		159.8	573.0	3.8	2.5	1.000036
54000.0	97.1	-56.6		156.3	573.0	320.5	3.0	1.000035
54500.0	94.3	-57.2		152.9	572.5	305.7	4.4	1.000034
55000.0	92.5	-57.6		149.0	571.9	261.0	10.1	1.000033
55500.0	90.3	-58.0		146.2	571.4	247.3	20.5	1.000033
56000.0	88.2	-58.4		143.0	570.9	242.2	30.4	1.000032
56500.0	86.0	-58.6		139.9	570.0	238.4	35.9	1.000031
57000.0	84.0	-59.3		136.0	569.0	232.1	41.5	1.000030
57500.0	82.0	-59.7		133.3	569.2	231.0	49.5	1.000030
58000.0	80.0	-60.1		130.9	568.7	231.5	58.6	1.000029
58500.0	78.1	-60.5		128.0	568.1	232.0	66.9	1.000029
59000.0	76.3	-60.9		125.2	567.0	234.5	73.9	1.000028
59500.0	74.5	-60.3		121.3	566.4	230.5	78.4	1.000027
60000.0	72.7	-60.1		118.0	566.0	230.0	72.9	1.000026
60500.0	71.0	-59.8		114.0	574.0	241.3	67.4	1.000025
61000.0	69.3	-59.3		111.0	573.7	240.4	60.0	1.000025
61500.0	67.5	-59.9		108.9	572.9	240.1	52.0	1.000024
62000.0	65.0	-57.0		106.0	572.1	240.4	47.0	1.000024
62500.0	64.4	-56.1		104.4	571.0	240.1	41.5	1.000023
63000.0	62.9	-58.7		102.2	570.5	244.9	35.8	1.000023

GEODETIC COORDINATES  
32.40043 LAT DEG  
100.37033 LON DEG

UPPER AIR DATA  
1000020104  
WHITE SANDS

STATION ALTITUDE 3489.00 FEET MSL  
10 APR. 79 1005 HRS MST  
ASCENSION NO. 104

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CELSIUS	REL. HUM. PERCENT	WIND VELOCITY GV/CURL METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(T)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
33500.0	91.4	-54.3		100.0	569.7	242.1	29.9	1.000022
34000.0	89.9	-59.9		97.3	565.9	233.0	24.1	1.000022
34500.0	88.5	-60.5		95.0	560.1	233.2	15.8	1.000021
35000.0	87.1	-61.1		93.0	557.2	219.0	7.6	1.000021
35500.0	85.7	-61.8		91.9	550.4	151.5	2.8	1.000020
36000.0	84.4	-61.3		89.9	547.0	75.4	6.5	1.000020
36500.0	83.1	-60.2		88.9	543.5	63.1	12.0	1.000019
37000.0	81.8	-59.1		84.4	549.3	57.6	14.1	1.000019
37500.0	80.6	-58.0		81.9	571.4	53.9	16.2	1.000018
38000.0	79.1	-57.4		79.3	572.2	51.9	17.7	1.000018
38500.0	78.2	-57.3		77.9	572.3	51.1	18.6	1.000017
39000.0	77.1	-57.2		76.0	572.5	50.4	19.5	1.000017
39500.0	75.9	-57.1		74.1	572.0	49.0	15.7	1.000017
40000.0	74.3	-57.0		72.4	572.7	37.0	11.2	1.000016
40500.0	73.3	-56.9		70.0	572.9	15.5	7.1	1.000016
41000.0	72.3	-56.8		68.9	573.0	309.9	6.0	1.000015
41500.0	71.3	-56.7		67.3	573.2	274.2	11.1	1.000015
42000.0	70.5	-56.6		65.0	573.3	263.5	17.2	1.000015
42500.0	69.8	-56.5		64.1	573.4	253.9	23.2	1.000014
43000.0	69.0	-56.4		62.5	573.9	259.1	29.3	1.000014
43500.0	68.0	-56.3		61.0	573.7	254.6	34.6	1.000014
44000.0	67.1	-55.9		59.5	574.2	253.5	39.7	1.000013
44500.0	66.2	-54.7		57.0	575.0	252.6	44.6	1.000012
45000.0	65.4	-53.5		50.1	577.4	251.0	46.4	1.000012
45500.0	64.6	-52.9		54.3	579.0	251.4	40.2	1.000012
46000.0	63.8	-51.0		53.0	580.0	250.8	49.4	1.000012
46500.0	63.0	-50.1		51.5	581.9	250.0	48.7	1.000011
47000.0	62.2	-50.5		50.4	581.4	249.2	46.0	1.000011
47500.0	61.5	-50.9		49.0	580.9	243.2	47.2	1.000011
48000.0	60.8	-51.3		48.3	580.9	247.1	46.4	1.000011
48500.0	60.1	-51.7		47.3	579.9	245.9	45.5	1.000011
49000.0	59.4	-51.5		46.2	580.0	244.6	44.5	1.000010
49500.0	58.7	-51.2		45.0	580.7	243.2	43.3	1.000010
50000.0	58.0	-51.0		44.0	580.7	241.7	42.2	1.000010
50500.0	57.4	-50.7		42.9	581.0	240.6	40.6	1.000010
51000.0	56.8	-50.5		41.3	581.5	239.6	39.5	1.000009
51500.0	56.2	-50.1		40.6	581.7	238.9	36.4	1.000009
52000.0	55.6	-49.2		39.0	583.0	238.6	34.9	1.000009
52500.0	55.0	-48.3		38.7	584.1	238.7	33.5	1.000009
53000.0	54.4	-47.5		37.7	585.2	238.8	32.2	1.000008



GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

UPPER AIR DATA  
1000020104  
WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL  
10 APR. 79 1005 HRS MST  
ASCENSION NO. 104

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY G/CM <sup>3</sup>	SPEED OF SOUND M/SEC	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
03500.0	23.9	-46.6	39.7	586.4	239.4	32.1	1.000000A	
04000.0	23.3	-45.7	35.7	587.5	240.2	32.4	1.000000A	
04500.0	22.8	-45.5	34.9	587.8	240.9	32.7	1.000000A	
05000.0	22.3	-45.3	34.1	588.0	242.0	33.4	1.000000A	
05500.0	21.0	-45.1	33.3	588.3	243.3	34.4	1.0000007	
06000.0	20.3	-44.9	32.5	588.5	244.5	35.5	1.0000007	
06500.0	20.3	-44.7	31.3	588.6	245.7	36.6	1.0000007	
07000.0	20.4	-44.6	31.0	588.8	247.0	38.8	1.0000007	
07500.0	19.9	-44.3	30.3	589.3	248.1	41.1	1.0000007	
08000.0	19.5	-43.9	29.0	589.5	249.1	43.2	1.0000007	
08500.0	19.0	-43.0	28.4	590.3	250.0	45.7	1.0000006	
09000.0	18.0	-43.2	28.2	590.6	250.9	48.4	1.0000006	
09500.0	18.2	-42.8	27.5	591.3	251.6	51.0	1.0000006	
10000.0	17.5	-42.4	26.9	591.7	252.3	53.6	1.0000006	
10500.0	17.4	-42.1	26.3	592.2	252.5	55.1	1.0000006	
11000.0	17.0	-41.7	25.0	592.7	252.2	56.3	1.0000006	
11500.0	16.7	-41.3	23.0	593.2	252.0	57.6	1.0000006	
12000.0	16.3	-40.9	24.4	593.7	251.8	57.0	1.0000005	
12500.0	15.9	-40.5	23.9	594.2	251.0	52.3	1.0000005	
13000.0	15.6	-40.2	23.0	594.6	250.1	47.5	1.0000005	
13500.0	15.2	-39.8	22.7	595.1	248.9	42.8	1.0000005	
14000.0	14.9	-39.4	22.2	595.6	247.5	35.1	1.0000005	
14500.0	14.6	-39.2	21.7	595.9	245.2	26.3	1.0000005	
15000.0	14.3	-39.1	21.2	596.0	240.7	17.6	1.0000005	
15500.0	13.9	-39.0	20.0	596.2	239.0	10.1	1.0000005	
16000.0	13.6	-38.6	19.3	596.3	243.1	10.0	1.0000005	
16500.0	13.4	-38.7	19.0	596.5	226.1	9.9	1.0000004	
17000.0	13.1	-38.6	19.4	596.6	227.1	9.9	1.0000004	
17500.0	12.3	-38.5	19.0	596.5	237.0	14.0	1.0000004	
18000.0	12.3	-38.4	18.3	596.9	240.0	23.3	1.0000004	
18500.0	12.2	-38.3	18.1	597.0	243.7	32.8	1.0000004	
19000.0	12.0	-38.2	17.3	597.2	245.3	42.3	1.0000004	
19500.0	11.7	-38.0	17.0	597.3	246.1	50.4	1.0000004	
100000.0	11.5	-37.9	17.0	597.5	246.1	58.3	1.0000004	
100500.0	11.2	-37.8	18.0	597.0	240.3	66.1	1.0000004	
101000.0	11.0	-37.7	18.2	597.6			1.0000004	
101500.0	10.7	-37.6	18.0	597.9			1.0000004	
102000.0	10.5	-37.5	18.0	598.1			1.0000003	
102500.0	10.3	-37.3	18.2	598.2			1.0000003	
103000.0	10.0	-37.2	14.8	598.4			1.0000003	

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STATION ALTITUDE 3989.00 FEET MSL  
 10 APR. 79 1005 HRS MST  
 ASCENSION NO. 134

MRN SIGNIFICANT LEVEL DATA  
 1000020104  
 WHITE SANDS

GEODETIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LON DEG

GEOPOTENTIAL ALTITUDE METERS	DIRECTION DEG (TH)	SPEED KPS	WIND DATA N-S MPS	E-W MPS	DLW PT DEP DLG C	TEMPERATURE		PRESSURE MILLIBARS
						AIR DEG C		
3125.	999.**	999.**	-999.**	-999.**	99	-37.2		1.000+1
3055.	247.	17.	7.	15.	99	-39.3		1.480+1
2951.	248.	21.	6.	19.	99	-44.4		2.000+1
2949.	240.	17.	8.	14.	99	-45.7		2.330+1
2409.	239.	19.	10.	10.	99	-50.3		2.530+1
2334.	246.	23.	10.	21.	99	-51.7		3.000+1
2320.	250.	25.	9.	24.	99	-50.0		3.310+1
2243.	254.	20.	5.	19.	99	-56.2		3.730+1
2057.	52.	9.	-5.	-7.	99	-57.5		5.000+1
1995.	104.	2.	0.	-2.	99	-62.0		5.520+1
1440.	242.	33.	13.	29.	99	-56.0		7.000+1
1000.	235.	40.	23.	33.	99	-61.1		7.530+1
1022.	340.	1.	-1.	0.	99	-56.3		1.900+2

\*\* WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3989.00 FEET ASL  
 10 APR. 79 1005 HRS AST  
 ASCENSION NO. 104

MANDATORY LEVELS  
 1000020104  
 WHITE SANDS

GEODETTIC COORDINATES  
 32.40043 LAT DEG  
 106.37033 LONG DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	LEADPOINT	PERCENT	DEGREES(TN)	DIRECTION	SPEED KNOTS
650.0	4450.	13.9	-1.7	34.	244.9	244.9	24.4
600.0	6109.	7.4	-5.0	36.	233.1	233.1	30.0
750.0	7535.	2.4	-9.2	42.	230.7	230.7	22.9
700.0	9049.	-2.6	-12.3	47.	244.3	244.3	39.9
650.0	11562.	-7.4	-15.4	51.	240.3	240.3	32.5
600.0	13505.	-13.0	-19.4	50.	239.7	239.7	39.3
550.0	15743.	-17.7	-24.0	33.	240.0	240.0	42.1
500.0	18061.	-22.8	-28.9	37.	250.0	250.0	48.6
450.0	20374.	-27.0	-30.0	42.	240.3	240.3	63.1
400.0	23322.	-31.6	-35.5	24.	248.3	248.3	75.5
350.0	26379.	-35.4	-58.5	10.**	252.0	252.0	67.5
300.0	29321.	-42.8			232.0	232.0	84.9
250.0	33783.	-50.2			247.1	247.1	60.1
200.0	38593.	-48.3			249.2	249.2	71.0
175.0	41461.	-47.0			242.0	242.0	79.3
150.0	44783.	-53.2			239.0	239.0	68.1
125.0	48330.	-57.8			243.2	243.2	52.5
100.0	52322.	-56.3			315.0	315.0	2.1
80.0	57614.	-60.1			231.3	231.3	50.5
70.0	59374.	-56.0			242.3	242.3	63.7
60.0	63764.	-53.6			236.4	236.4	24.6
50.0	67431.	-57.5			52.3	52.3	17.1
40.0	72120.	-50.5			259.0	259.0	21.7
30.0	78209.	-51.7			245.9	245.9	43.5
25.0	82110.	-48.4			238.7	238.7	35.7
20.0	86930.	-44.4			247.0	247.0	40.4
15.0	93379.	-39.5			246.1	246.1	30.6
10.0	102570.	-37.2					

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

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GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

MON MANDATORY LEVELS  
1000020104  
WHITE SANDS

STATION ALTITUDE 3439.00 FEET MSL  
10 APR. 79 1005 HRS MST  
ASCENSION NO. 104

GEOCENTRAL ALTITUDE METERS	DIRECTION DEG (TN)	WIND DATA		DEW PTS	DEW PT DEP DEG C	TEMPERATURE		PRESSURE MILLIBARS
		SPEED MPS	DIR MPS			AIR DEG C		
2125.	9999.**	9999.**	-9999.**	-9999.**	99	-37.2		1.000+1
2040.	248.	20.	7.	10.	99	-39.5		1.500+1
2051.	248.	24.	8.	19.	99	-44.4		2.000+1
2003.	239.	17.	9.	15.	99	-48.4		2.500+1
2304.	246.	25.	10.	21.	99	-51.7		3.000+1
2190.	200.	11.	2.	11.	99	-56.5		4.000+1
2057.	53.	9.	-5.	-7.	99	-57.5		5.000+1
1943.	238.	17.	7.	11.	99	-59.9		6.000+1
1840.	242.	33.	15.	29.	99	-56.0		7.000+1
1763.	231.	30.	19.	25.	99	-60.1		8.000+1
1022.	315.	1.	-1.	1.	99	-56.3		1.000+2
1401.	245.	27.	11.	25.	99	-57.8		1.250+2
1505.	239.	25.	12.	30.	99	-53.2		1.500+2
1264.	242.	41.	19.	38.	99	-47.0		1.750+2
1170.	249.	37.	13.	34.	99	-48.3		2.000+2
1030.	247.	34.	13.	31.	99	-50.2		2.500+2
909.	253.	44.	13.	42.	99	-42.8		3.000+2
804.	252.	45.	14.	45.	20	-38.4		3.500+2
711.	248.	39.	14.	38.	14	-31.8		4.000+2
627.	247.	32.	13.	30.	09	-27.9		4.500+2
551.	250.	25.	9.	25.	10	-22.8		5.000+2
480.	240.	24.	11.	19.	11	-17.7		5.500+2
414.	235.	20.	11.	17.	00	-13.0		6.000+2
352.	240.	17.	8.	15.	00	-7.4		6.500+2
294.	244.	21.	9.	10.	10	-2.6		7.000+2
239.	231.	12.	7.	5.	12	2.4		7.500+2
180.	233.	19.	11.	15.	15	7.4		8.000+2
130.	245.	15.	5.	11.	16	13.9		8.500+2

\*\* WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4126.59 FEET MSL  
10 APR. 79  
ASCENSION NO. 173

SIGNIFICANT LEVEL DATA  
1000010173  
HOLLOMAN

GEODETIC COORDINATES	REL. HUM.
32.88865 LAT DEG	PERCENT
106.09965 LON DEG	
PRESSURE GEOMETRIC ALTITUDE	TEMPERATURE
MILLIBARS MSL FEET	AIR DEWPOINT
	DEGREES CENTIGRADE
858.8 4126.6	13.8
850.0 4410.5	-2.0
817.0 5491.0	-1.7
777.6 6822.5	-3.8
700.0 9596.4	-5.4
602.0 13448.4	-7.8
557.4 15367.1	-15.2
541.2 16093.6	-16.3
519.4 17096.8	-21.9
500.0 18016.7	-23.5
472.8 19353.2	-30.0
442.8 20901.6	-33.9
400.0 23262.8	-38.2
366.4 25263.5	-43.6
300.0 29728.4	-49.3
250.0 33717.8	-44.7
237.8 34804.4	-47.8
231.3 35409.6	-48.2
217.4 36766.8	-45.4
200.0 38532.8	-46.9
184.8 40288.8	-48.2
176.2 41313.6	-50.8
166.6 42521.0	-49.9
150.0 44758.4	-54.8
121.6 49135.0	-59.7
113.7 50531.1	-56.3
104.8 52236.9	-56.8
100.0 53222.3	-54.5
88.1 55914.9	-52.0
70.0 60729.9	-61.2
60.0 63861.6	-65.0
56.5 65094.8	-57.1
51.8 66905.6	-58.2
50.0 67644.5	-56.3
37.8 73506.2	-57.0
33.4 76119.9	-53.1

STATION ALTITUDE 4126.59 FEET MSL  
10 APR. 79  
ASCENSION NO. 173

UPPER AIR DATA  
1000010173  
HOLLOWMAN

GEODETIC COORDINATES  
32.88865 LAT DEG  
106.09965 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4126.6	858.8	13.8	-2.6	32.0	1040.3	660.7	240.0	20.0	1.000255
4500.0	847.2	11.5	-1.9	39.3	1034.4	658.0	241.0	23.8	1.000255
5000.0	831.8	9.7	-2.8	41.2	1022.1	656.0	242.0	28.9	1.000251
5500.0	816.7	8.0	-3.8	43.0	1009.9	653.9	242.7	33.9	1.000247
6000.0	801.7	6.7	-4.4	44.9	995.9	652.4	241.6	35.5	1.000243
6500.0	787.0	5.4	-5.0	46.8	982.1	650.9	238.9	33.8	1.000239
7000.0	772.4	4.1	-5.5	49.5	968.6	649.3	236.3	32.4	1.000236
7500.0	757.9	2.6	-5.8	53.9	955.5	647.6	235.1	32.0	1.000233
8000.0	743.7	1.2	-6.1	58.2	942.6	645.9	234.0	31.6	1.000229
8500.0	729.7	-.3	-6.6	62.5	929.8	644.1	234.4	31.3	1.000226
9000.0	716.0	-1.8	-7.1	66.8	917.3	642.4	235.4	31.1	1.000223
9500.0	702.6	-3.2	-7.7	71.2	905.0	640.7	235.9	30.5	1.000219
10000.0	689.0	-4.5	-8.5	73.2	891.9	639.1	234.5	29.2	1.000216
10500.0	675.7	-5.7	-9.5	74.6	878.6	637.6	233.4	28.7	1.000212
11000.0	662.6	-6.9	-10.4	76.0	865.6	636.2	233.1	29.7	1.000208
11500.0	649.7	-8.1	-11.4	77.4	852.8	634.7	233.1	29.5	1.000204
12000.0	637.1	-9.4	-12.3	78.9	840.2	633.2	233.3	28.5	1.000200
12500.0	624.8	-10.6	-13.3	80.3	827.8	631.7	233.0	26.0	1.000196
13000.0	612.7	-11.8	-14.3	81.7	815.6	630.2	232.9	24.3	1.000193
13500.0	600.8	-13.0	-15.2	83.4	803.5	628.7	233.8	25.8	1.000189
14000.0	588.8	-13.8	-15.5	87.6	790.1	627.7	236.4	29.6	1.000186
14500.0	577.1	-14.7	-15.7	91.8	777.0	626.7	239.3	35.2	1.000183
15000.0	565.7	-15.6	-16.1	95.9	764.1	625.6	242.9	36.1	1.000180
15500.0	554.4	-16.7	-17.3	95.0	752.3	624.2	245.5	35.4	1.000177
16000.0	543.3	-18.6	-21.2	79.8	742.8	621.9	246.9	34.1	1.000172
16500.0	532.3	-19.8	-22.6	78.2	731.2	620.4	244.3	36.9	1.000169
17000.0	521.5	-20.8	-23.4	79.7	719.4	619.1	242.5	38.5	1.000166
17500.0	510.8	-22.2	-26.2	69.5	708.7	617.3	241.1	39.5	1.000162
18000.0	500.3	-23.7	-29.8	56.4	698.3	615.5	241.3	39.6	1.000159
18500.0	490.0	-24.7	-31.4	53.8	686.9	614.1	241.8	40.2	1.000156
19000.0	479.8	-25.8	-32.8	51.6	675.7	612.8	242.4	41.4	1.000153
19500.0	469.9	-26.9	-34.3	49.2	664.4	611.5	243.7	43.8	1.000150
20000.0	460.0	-27.8	-35.6	46.7	652.9	610.3	245.3	47.3	1.000147
20500.0	450.4	-28.7	-37.0	44.1	641.7	609.2	246.4	50.2	1.000145
21000.0	440.9	-29.6	-38.4	41.9	630.6	608.0	247.2	52.9	1.000142
21500.0	431.5	-30.8	-39.5	41.5	620.1	606.6	247.4	55.2	1.000139
22000.0	422.3	-31.9	-40.7	41.1	609.8	605.1	247.1	57.0	1.000137
22500.0	413.4	-33.1	-41.8	40.6	599.7	603.7	246.6	59.2	1.000135
23000.0	404.6	-34.2	-43.0	40.2	589.7	602.2	245.7	62.6	1.000132
23500.0	395.9	-35.2	-44.2	38.8	579.5	601.0	245.0	66.1	1.000130



STATION ALTITUDE 4126.59 FEET MSL  
 10 APR. 79 1005 HRS MST  
 ASCENSION NO. 173

UPPER AIR DATA  
 100010173  
 HOLLOWMAN

GEODEIC COORDINATES  
 32.88865 LAT DEG  
 106.09965 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	387.3	-36.1	-45.6	36.3	569.1	599.9	244.8	70.1	1.000127
24500.0	378.9	-37.0	-47.0	33.8	558.8	598.7	244.7	74.1	1.000125
25000.0	370.7	-37.8	-48.5	31.3	546.7	597.6	245.6	77.7	1.000123
25500.0	362.5	-38.6	-50.1	28.4**	538.5	596.6	246.6	81.2	1.000120
26000.0	354.5	-39.4	-51.8	25.1**	528.2	595.7	247.9	84.8	1.000118
26500.0	346.7	-40.1	-53.6	21.7**	518.1	594.8	249.3	88.5	1.000116
27000.0	339.0	-40.8	-55.6	18.3**	508.2	593.9	250.4	91.5	1.000113
27500.0	331.5	-41.5	-57.8	15.0**	498.5	592.9	251.3	93.6	1.000111
28000.0	324.1	-42.2	-60.4	11.6**	489.0	592.0	252.0	95.7	1.000109
28500.0	317.0	-42.9	-63.5	8.3**	479.6	591.1	252.2	97.6	1.000107
29000.0	309.9	-43.7	-67.8	4.9**	470.5	590.2	252.3	99.8	1.000105
29500.0	303.1	-44.4	-76.1	1.5**	461.5	589.3	252.3	103.0	1.000103
30000.0	296.3	-44.9			452.2	588.6	252.3	105.1	1.000101
30500.0	289.6	-45.3			442.8	588.1	252.3	105.4	1.000099
31000.0	283.1	-45.7			433.5	587.6	251.8	105.4	1.000097
31500.0	276.7	-46.1			424.5	587.1	250.6	104.8	1.000095
32000.0	270.4	-46.5			415.6	586.6	249.0	104.7	1.000093
32500.0	264.3	-46.9			406.9	586.0	246.7	105.3	1.000091
33000.0	258.3	-47.2			398.4	585.5	244.7	105.6	1.000089
33500.0	252.5	-47.6			390.0	585.0	242.9	105.3	1.000087
34000.0	246.8	-47.9			381.7	584.7	241.6	104.4	1.000085
34500.0	241.2	-48.1			373.3	584.4	241.7	102.1	1.000083
35000.0	235.7	-47.3			363.5	585.5	242.2	99.6	1.000081
35500.0	230.3	-45.5			352.5	587.8	244.6	96.8	1.000079
36000.0	225.1	-46.1			345.4	587.1	247.1	93.9	1.000077
36500.0	220.1	-46.6			338.4	586.4	249.9	89.5	1.000075
37000.0	215.1	-47.1			331.4	585.8	252.7	85.0	1.000074
37500.0	210.2	-47.4			324.4	585.3	253.7	78.3	1.000072
38000.0	205.4	-47.8			317.5	584.8	254.9	71.6	1.000071
38500.0	200.8	-48.1			310.8	584.4	254.9	65.6	1.000069
39000.0	196.2	-48.8			304.7	583.5	254.4	59.9	1.000068
39500.0	191.7	-49.6			298.7	582.5	253.6	54.8	1.000067
40000.0	187.3	-50.4			292.9	581.5	252.3	51.7	1.000065
40500.0	183.0	-50.6			286.5	581.2	250.8	48.6	1.000064
41000.0	178.8	-50.2			279.3	581.7	248.4	47.2	1.000062
41500.0	174.7	-49.9			272.6	582.1	245.4	47.2	1.000061
42000.0	170.7	-49.9			266.3	582.1	242.5	47.3	1.000059
42500.0	166.8	-49.9			260.2	582.1	239.8	49.9	1.000058
43000.0	162.9	-50.9			255.4	580.7	237.5	53.2	1.000057
43500.0	159.1	-52.0			250.7	579.3	236.5	56.4	1.000056

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4126.59 FEET MSL  
10 APR. 79  
ASCENSION NO. 173

UPPER AIR DATA  
1000010173  
HOLLOMAN

GEODETIC COORDINATES  
32.88865 LAT DEG  
106.09965 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
44000.0	155.4	-53.1			246.1	577.9	236.9	59.4	1.000055
44500.0	151.8	-54.2			241.6	576.4	237.5	62.4	1.000054
45000.0	148.3	-55.1			236.9	575.3	238.9	64.9	1.000053
45500.0	144.8	-55.6			231.8	574.6	240.3	67.4	1.000052
46000.0	141.3	-56.2			226.9	573.8	240.9	67.2	1.000051
46500.0	138.0	-56.7			222.1	573.1	241.3	66.3	1.000049
47000.0	134.7	-57.3			217.4	572.4	241.7	65.2	1.000048
47500.0	131.5	-57.9			212.8	571.6	241.5	62.7	1.000047
48000.0	128.4	-58.4			208.3	570.9	241.2	60.2	1.000046
48500.0	125.4	-59.0			203.9	570.1	241.4	60.0	1.000045
49000.0	122.4	-59.5			199.6	569.4	242.0	62.5	1.000044
49500.0	119.5	-58.8			194.2	570.4	242.6	65.0	1.000043
50000.0	116.6	-57.6			188.5	572.0	244.0	68.9	1.000042
50500.0	113.9	-56.4			183.0	573.6	245.2	72.8	1.000041
51000.0	111.2	-56.4			178.7	573.5	246.2	74.8	1.000040
51500.0	108.6	-56.6			174.6	573.3	247.1	75.3	1.000039
52000.0	106.0	-56.7			170.6	573.1	247.8	75.4	1.000038
52500.0	103.5	-56.2			166.2	573.8	247.5	71.7	1.000037
53000.0	101.1	-55.0			161.4	575.4	247.1	68.0	1.000036
53500.0	98.7	-54.2			157.1	576.4	246.4	62.1	1.000035
54000.0	96.4	-53.8			153.1	577.0	245.3	55.3	1.000034
54500.0	94.2	-53.3			149.2	577.6	244.1	48.5	1.000033
55000.0	92.0	-52.8			145.4	578.2	243.9	41.6	1.000032
55500.0	89.8	-52.4			141.8	578.8	243.4	34.7	1.000032
56000.0	87.7	-52.2			138.3	579.1	243.2	28.7	1.000031
56500.0	85.7	-53.1			135.6	577.0	243.4	24.4	1.000030
57000.0	83.7	-54.1			133.0	576.6	243.8	20.2	1.000030
57500.0	81.7	-55.0			130.4	575.4	244.2	17.5	1.000029
58000.0	79.7	-56.0			127.9	574.1	244.4	16.2	1.000028
58500.0	77.9	-56.9			125.5	572.8	244.7	15.0	1.000028
59000.0	76.0	-57.9			123.0	571.6	243.9	13.5	1.000027
59500.0	74.2	-58.9			120.7	570.3	242.4	11.8	1.000027
60000.0	72.5	-59.8			118.4	569.0	240.4	10.2	1.000026
60500.0	70.8	-60.8			116.1	567.8	232.8	9.3	1.000026
61000.0	69.1	-61.5			113.7	566.7	222.8	8.7	1.000025
61500.0	67.4	-62.1			111.3	565.9	211.9	8.5	1.000025
62000.0	65.8	-62.7			108.9	565.1	209.4	10.3	1.000024
62500.0	64.2	-63.3			106.5	564.3	207.7	12.1	1.000024
63000.0	62.6	-64.0			104.2	563.5	207.9	13.9	1.000023
63500.0	61.1	-64.6			102.0	562.7	214.9	15.9	1.000023

STATION ALTITUDE 4126.59 FEET MSL  
10 APR. 79 1005 HRS MST  
ASCENSION NO. 173

UPPER AIR DATA  
1000010173  
HOLLOMAN

GEODETIC COORDINATES  
32.88865 LAT DEG  
106.09965 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
64000.0	59.6	-64.1		99.3	563.3	220.3	18.1	1.000022
64500.0	58.2	-60.9		95.5	567.6	225.5	20.2	1.000021
65000.0	56.8	-57.7		91.8	571.8	232.3	22.1	1.000020
65500.0	55.4	-57.3		89.5	572.3	238.0	24.1	1.000020
66000.0	54.1	-57.6		87.5	571.9	243.0	26.1	1.000019
66500.0	52.8	-58.0		85.5	571.5	248.2	27.2	1.000019
67000.0	51.6	-58.0		83.6	571.5	252.9	28.6	1.000019
67500.0	50.3	-56.7		81.0	573.2	257.2	29.1	1.000018
68000.0	49.2	-56.3		79.0	573.6	261.8	27.4	1.000018
68500.0	48.0	-56.4		77.1	573.6	266.9	25.8	1.000017
69000.0	46.9	-56.5		75.3	573.5	272.1	23.9	1.000017
69500.0	45.8	-56.5		73.6	573.4	276.8	20.6	1.000016
70000.0	44.7	-56.6		71.9	573.3	283.3	17.5	1.000016
70500.0	43.6	-56.6		70.2	573.2	289.3	15.1	1.000016
71000.0	42.6	-56.7		68.6	573.2	288.0	13.7	1.000015
71500.0	41.6	-56.8		67.0	573.1	286.5	12.3	1.000015
72000.0	40.6	-56.8		65.4	573.0	282.5	11.5	1.000015
72500.0	39.7	-56.9		63.9	572.9	273.5	12.3	1.000014
73000.0	38.7	-56.9		62.4	572.8	265.8	13.4	1.000014
73500.0	37.8	-57.0		60.9	572.8			1.000014
74000.0	36.9	-56.3		59.3	573.7			1.000013
74500.0	36.1	-55.5		57.7	574.7			1.000013
75000.0	35.2	-54.8		56.2	575.7			1.000013
75500.0	34.4	-54.0		54.7	576.7			1.000012
76000.0	33.6	-53.3		53.2	577.7			1.000012



STATION ALTITUDE 4126.59 FEET MSL  
10 APR. 79  
ASCENSION NO. 173

MRN SIGNIFICANT LEVEL DATA  
1000010173  
HOLLOMAN

GEODETTIC COORDINATES  
32.88865 LAT DEG  
106.09965 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	WIND DATA		E-W MPS	DEW PT DEP DEG C	TEMPERATURE		PRESSURE MILLIBARS
		SPEED MPS	N-S MPS			AIR DEG C		
2311.	9999.**	9999.**	-9999.**	-9999.**	99	-53.1	3.340+1	
2232.	9999.**	9999.**	-9999.**	-9999.**	99	-57.0	3.780+1	
2054.	258.	15.	3.	14.	99	-56.3	5.000+1	
2032.	252.	15.	4.	14.	99	-58.2	5.180+1	
1977.	233.	12.	7.	9.	99	-57.1	5.650+1	
1940.	219.	9.	7.	6.	99	-65.0	6.000+1	
1845.	228.	5.	3.	3.	99	-61.2	7.000+1	
1699.	243.	15.	7.	14.	99	-52.0	8.810+1	
1617.	247.	34.	13.	31.	99	-54.5	1.000+2	

\*\* WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4126.59 FEET MSL  
10 APR. 79  
ASCENSION NO. 173

MANDATORY LEVELS  
1000010173  
HOLLOWMAN

GEODETTIC COORDINATES  
32.88865 LAT DEG  
106.09965 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4408.	11.8	-1.7	39.	240.8	22.9
800.0	6055.	6.6	-4.5	45.	241.3	35.3
750.0	7779.	1.8	-6.0	56.	234.5	31.8
700.0	9588.	-3.5	-7.8	72.	235.6	30.3
650.0	11495.	-8.1	-11.4	77.	233.1	29.5
600.0	13517.	-13.0	-15.2	84.	233.9	25.8
550.0	15678.	-17.4	-18.8	89.	246.2	34.7
500.0	17993.	-23.7	-30.0	56.	241.3	39.6
450.0	20493.	-28.7	-37.1	44.	246.4	50.3
400.0	23226.	-34.8	-43.6	40.	245.3	64.4
350.0	26252.	-39.8	-52.8	23.**	248.7	86.9
300.0	29673.	-44.7			252.3	104.3
250.0	33648.	-47.8			242.2	105.1
200.0	38494.	-48.2			254.8	64.9
175.0	41360.	-49.9			245.8	47.2
150.0	44642.	-54.8			238.2	63.6
125.0	48431.	-59.1			241.4	60.2
100.0	53063.	-54.5			246.9	66.3
80.0	57772.	-55.9			244.4	16.4
70.0	60526.	-61.2			228.9	9.0
60.0	63637.	-65.0			218.7	17.3
50.0	67395.	-56.3			256.2	28.7
40.0	72039.	-56.9			277.1	11.9

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4126.59 FEET MSL  
 10 APR. 79 1005 HRS MST  
 ASCENSION NO. 173

MRN MANDATORY LEVELS  
 1000010173  
 HOLLOMAN

GEODETIC COORDINATES  
 32.88865 LAT DEG  
 106.09965 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	WIND DATA SPEED MPS	N-S MPS	E-W MPS	DEW PT DEP DEG C	TEMPERATURE		PRESSURE MILLIBARS
						AIR DEG C		
2196.	277.	6.	-1.	6.	99	-56.9		4.000+1
2054.	258.	15.	3.	14.	99	-56.3		5.000+1
1940.	219.	9.	7.	6.	99	-65.0		6.000+1
1845.	229.	5.	3.	3.	99	-61.2		7.000+1
1761.	244.	8.	4.	8.	99	-55.9		8.000+1
1617.	247.	34.	13.	31.	99	-54.5		1.000+2
1476.	241.	31.	15.	27.	99	-59.1		1.250+2
1361.	238.	33.	17.	28.	99	-54.8		1.500+2
1261.	246.	24.	10.	22.	99	-49.9		1.750+2
1173.	255.	33.	9.	32.	99	-48.2		2.000+2
1026.	242.	54.	25.	48.	99	-47.8		2.500+2
904.	252.	54.	16.	51.	99	-44.7		3.000+2
800.	249.	45.	16.	42.	13	-39.8		3.500+2
708.	245.	33.	14.	30.	09	-34.8		4.000+2
625.	246.	26.	10.	24.	08	-28.7		4.500+2
548.	241.	20.	10.	18.	06	-23.7		5.000+2
478.	246.	18.	7.	16.	01	-17.4		5.500+2
412.	234.	13.	8.	11.	02	-13.0		6.000+2
350.	233.	15.	9.	12.	03	-8.1		6.500+2
292.	236.	16.	9.	13.	04	-3.5		7.000+2
237.	234.	16.	9.	13.	08	1.8		7.500+2
185.	241.	18.	9.	16.	11	6.6		8.000+2
134.	241.	12.	6.	10.	13	11.8		8.500+2